PMC-EF2a

(2.06.02)

# U.S. DEPARTMENT OF ENERGY
## EERE PROJECT MANAGEMENT CENTER
## NEPA DETERMINATION

**RECIPIENT:** General Electric Company **STATE:** NY

**PROJECT TITLE :** Deployable Commercial Rooftop Solar Electric System

| Funding Opportunity Announcement Number | Procurement Instrument Number | NEPA Control Number | CID Number |
|---|---|---|---|
| DE-FOA-0000493 | DE-EE0005437 | GFO-0005437-002 | GO5437 |

**Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:**

**CX, EA, EIS APPENDIX AND NUMBER:**
Description:

| | |
|---|---|
| **B5.15 Small-scale renewable energy research and development and pilot projects** | Small-scale renewable energy research and development projects and small-scale pilot projects, provided that the projects are located within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices. |

Rational for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to General Electric Company (GE) to conduct pre-commercial development and deployment activities that advance solar photovoltaic (PV) technology. DOE funding would be used to develop a deployable solar electric system designed for rapid and low cost installation onto a slope roof.

DOE made a previous NEPA determination, GFO-0005437-001 (CX A9, B3.6 11/9/2011), for Budget Period 1 which includes design, fabrication and testing of the PV technology.

This NEPA determination applies to Budget Period 2 (BP2) which includes developing and deploying a pre-configured folding string solar PV array that is anchored by a DC-DC optimizer.

Deployment activities would occur at Innovative Test Solutions (ITS), located at 551 Kinds Road, Schenectady, New York 12304. The array would be 25 ft. by 15 ft. and consist of two folding solar PV array strings with four PV modules. Both folding solar PV arrays are 1.25 kW each, connected by a 2.5 kW DC-DC optimizer, and have a maximum DC output of 3.5 kW. Each PV module would consist of a solar PV lamination bonded to a lightweight aluminum panel with integrated hinges. The system would not be connected to the utility electrical grid. It would be mounted on an existing 30 ft. by 25 ft. sloped structure that emulates a commercial membrane roofing surface on the ground. The roof would be located in an enclosed outdoor yard, adjacent to the facility and not visible from the road. The site is zoned for industrial use and has been previously disturbed.

The U.S. Fish and Wildlife Service Endangered Species Program website identified the Karner Blue Butterfly as a threatened species within Schenectady County. DOE has determined that this species would not be affected because the proposed project would occur on previously disturbed property in an industrial area that does not have suitable habitat for the butterfly. There are no cultural resources, floodplains or wetlands in close proximity to the proposed project location. These resouces would not be impacted by this project.

The fabrication of the 2.5 kW DC-DC converter prototype and the electrical Busway would be completed at two GE facilities located at 1 Research Circle, Niskayuna, New York 12031 and 41 Woodford Avenue, Plainville, Connecticut 06062. GE has completed an R&D questionnaire addressing the protocols in place for laboratory safety, risk management, chemical handling and waste disposal. GE complies with standard laboratory safety procedures and labs are inspected by staff and safety personnel. GE operates under all applicable permits to conduct research. Liquid effluents consisting of solvents, acids, bases, chemical reagents, and other liquid wastes will be disposed of by licensed contractors.

At this time, Budget Period 3 (BP3) has not been defined to the extent that DOE can conduct a NEPA review. This NEPA determination does not apply to BP3 and is subject to further NEPA review prior to the authorization of federal funds.

DOE has determined that the fabrication, development and deployment of the PV array in Budget Period 2 (Phase 2) are consistent with actions defined in DOE categorical exclusion B5.15, "small-scale renewable energy research and development and pilot projects".

**NEPA PROVISION**

DOE has made a conditional NEPA determination for this award, and funding for certain tasks under this award is contingent upon the final NEPA determination.

Insert the following language in the award:

You are restricted from taking any action using federal funds, which would have an adverse affect on the environment or limit the choice of reasonable alternatives prior to DOE/NNSA providing either a NEPA clearance or a final NEPA decision regarding the project.

Prohibited actions include:
Budget Period 3
This restriction does not preclude you from:
Budget Periods 1 and 2
If you move forward with activities that are not authorized for federal funding by the DOE Contracting Officer in advance of the final NEPA decision, you are doing so at risk of not receiving federal funding and such costs may not be recognized as allowable cost share.

Note to Specialist :

Kelly Daigle 9/25/2012

DOE Share: $466,784
Cost Share: $466,784
Total Project Cost: $933,568

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature: Electronically Signed By: Kristin Kerwin _____ Date: 9/26/2012
NEPA Compliance Officer

**FIELD OFFICE MANAGER DETERMINATION**

☐ Field Office Manager review required

**NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:**

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

**BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :**

Field Office Manager's Signature: _____ Date: _____
Field Office Manager